

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MAURICE S. BROOKHART, LYNDIA KAYE JOHNSON, CHRISTOPHER  
MOORE KILLIAN, SAMUEL DAVID ARTHUR, JERALD FELDMAN, ELIZABETH  
FORRESTER MCCORD, STEPHAN JAMES MCLAIN, KRISTINA ANN KREUTZER,  
ALISON MARGARET ANNE BENNETT, EDWARD BRYAN COUGHLIN, STEVEN DALE  
ITTEL, ANJU PARTHASARATHY, and DANIEL JOSEPH TEMPEL

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Appeal No. 2004-1829  
Application No. 09/887,273

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ON BRIEF

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Before PAK, KRATZ, and DELMENDO, Administrative Patent Judges.  
DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134  
(2003) from the examiner's final rejection of claims 563 through  
574, which are all of the claims pending in the above-identified  
application.

The subject matter on appeal relates to a process for the  
production of a polyolefin having at least 50 branches per 1000

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methylene groups and at least two branches of different lengths containing less than 6 carbon atoms each. Further details of this appealed subject matter are recited in representative claim 563 reproduced below:

563. A process for the production of a polyolefin having at least 50 branches per 1000 methylene groups and at least two branches of different lengths containing less than 6 carbon atoms each, comprising the step of polymerizing one or more monomers of the formula  $\text{H}_2\text{C}=\text{CH}(\text{CH}_2)_e\text{G}$  wherein  
G is hydrogen or  $-\text{CO}_2\text{R}^1$ ,  
e is 0 or an integer of 1 to 20,  
 $\text{R}^1$  is hydrogen, hydrocarbyl or substituted hydrocarbyl, and  
in at least 50 mole percent of said monomers G is hydrogen,  
by contacting said one or more monomers with a transition metal containing coordination polymerization catalyst under polymerizing conditions such that in said polyolefin:  
(i) the number of branches per 1000 methylene groups is 90% or less than the number of theoretical branches per 1000 methylene groups, or  
(ii) the number of branches per 1000 methylene groups is 110% or more of theoretical branches per 1000 methylene groups; or  
(iii) when there should be no branches theoretically present, said polyolefin has 50 or more branches per 1000 methylene groups.

The examiner does not rely on any prior art to support the rejection of the appealed claims. (Examiner's answer mailed Oct. 6, 2003, paper 12, page 2.)

Claims 563 through 574 on appeal stand rejected under 35 U.S.C. § 112, ¶1, as being non-enabled. (Id. at 3-9.)

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We reverse.

The examiner's position is that "the specification, while being enabling for nickel and palladium complexes comprising a diimine ligand, does not reasonably provide enablement for methods including any catalyst formulation within the scope of 'transition metal containing coordination polymerization catalyst.'" (Answer at 3.) According to the examiner, "the [appealed] claims include the use of any transition metal coordination catalyst, yet the specification includes no teaching that the claimed process could be performed with any catalyst other than one comprising nickel or palladium and a diimine coordinating ligand." (Id.) We cannot agree.

Like any other rejection, the initial burden of establishing a prima facie case of unpatentability based on non-enablement under the first paragraph of 35 U.S.C. § 112 rests on the examiner. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The predecessor of our reviewing court has stated as follows:

[A] specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of Section 112 unless there is reason to doubt the

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objective truth of the statements contained therein  
which must be relied on for enabling support.

In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). Thus, it is only upon the advancement of acceptable reasoning on the part of the examiner that the burden of proving enablement shifts to the appellants. In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982).

"Although not explicitly stated in section 112, to be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'"<sup>1</sup> In re Wright, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). As long as "undue experimentation" is not involved, a specification would comply with the enablement requirement of the statute even if a reasonable amount of routine experimentation is necessary to practice the claimed invention. Enzo Biochem Inc. v.

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<sup>1</sup> The question of whether making and using the invention would have required "undue experimentation" depends on several underlying factual inquiries including: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. In re Wands, 858 F.2d 731, 735, 736-37, 8 USPQ2d 1400, 1402, 1404 (Fed. Cir. 1988).

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Calgene, 188 F.3d 1362, 1371, 52 USPQ2d 1129, 1135 (Fed. Cir. 1999). That is, even "a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed..." Wands, 858 F.2d at 737, 8 USPQ2d at 1404.

Contrary to the examiner's belief, the subject matter on appeal does not "include the use of any transition metal coordination catalyst." Rather, the claim limitation "transition metal containing coordination polymerization catalyst" must be considered in the context of the claimed subject matter as a whole, which requires the production of a polyolefin having the specified properties. To the extent that a transition metal compound, under polymerizing conditions, does not produce a polyolefin having the specified properties, it is not encompassed by the appealed claims.

In addition, the present specification contains extensive guidance in the form of nearly five hundred pages of disclosure including hundreds of working examples. Given this extensive guidance as well as the high level of skill in the art, which the examiner readily admits (answer at 7), the examiner has not adequately established on this record that one of ordinary skill

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in the art would be subject to undue experimentation in determining suitable transition metal catalysts and polymerizing conditions needed to produce the specified polyolefin.

For these reasons, we reverse the examiner's rejection under 35 U.S.C. § 112, ¶1, of appealed claims 563 through 574 as being non-enabled.

The decision of the examiner is reversed.

REVERSED

Chung K. Pak	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
Peter F. Kratz	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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	)	
Romulo H. Delmendo	)	
Administrative Patent Judge	)	

RHD/kis

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